



# OMPS Nadir Status (Again!)

Colin Seftor



# Where are we now?



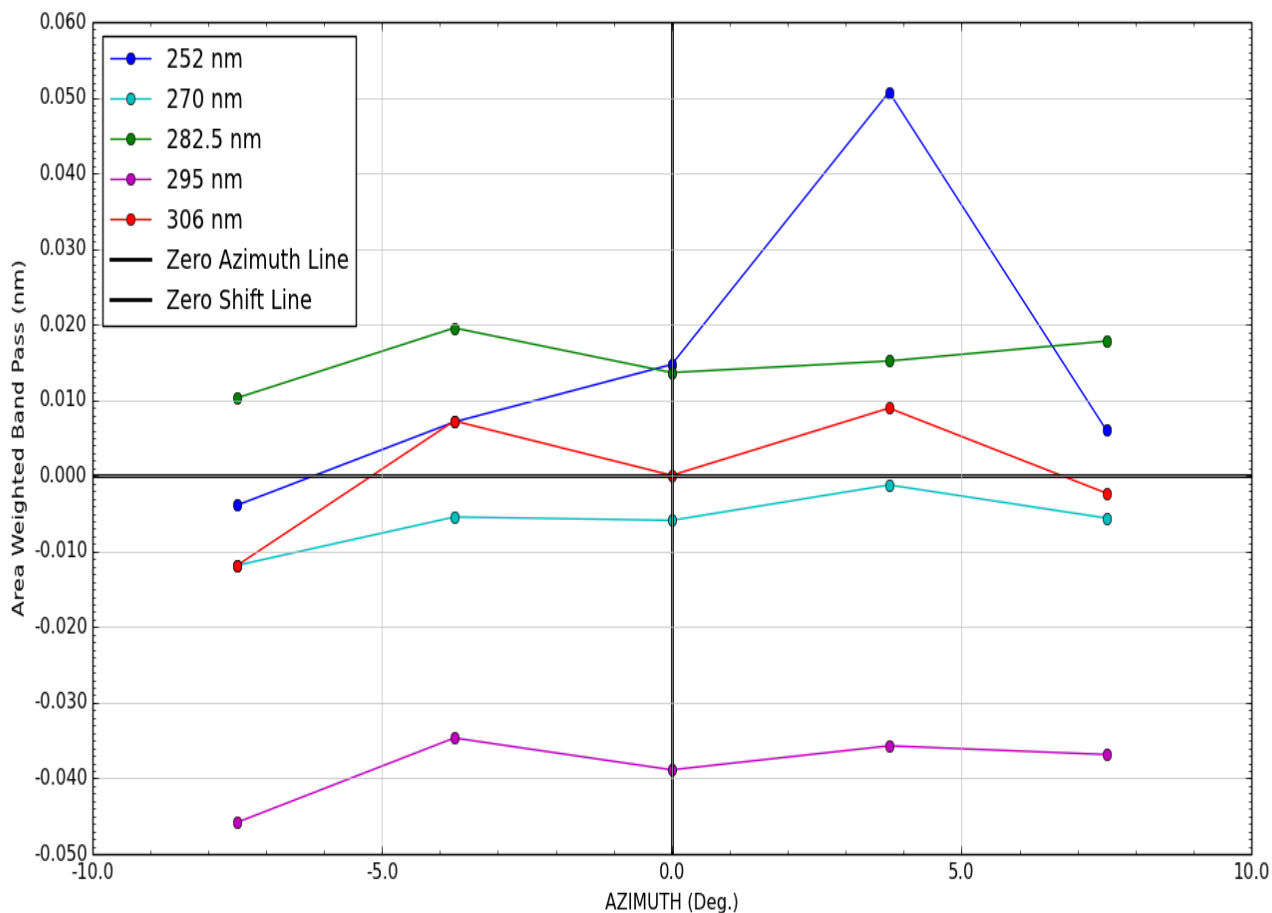
- ▶ Remaining L1B/L2 issues being actively worked
  - Most “resolved”
- ▶ L1B meta data complete
  - L2/L3 meta data will use same template but have not yet been “blessed” by GSFC DISC
- ▶ Aiming for completion of L1B processing in May/June
  - L2/L3 processed after that
  - Is much faster, should not take long
- ▶ L2 NM results should not change
  - Issues being worked affect wavelengths < 310 nm
- ▶ L2 NP results may change
  - Issues being worked affect wavelengths > 295 nm



# NP Bandpass Issue Near 295 NM



Weighted-average central wavelength does not match  
Ball's Channel Band Center (CBC) wavelength



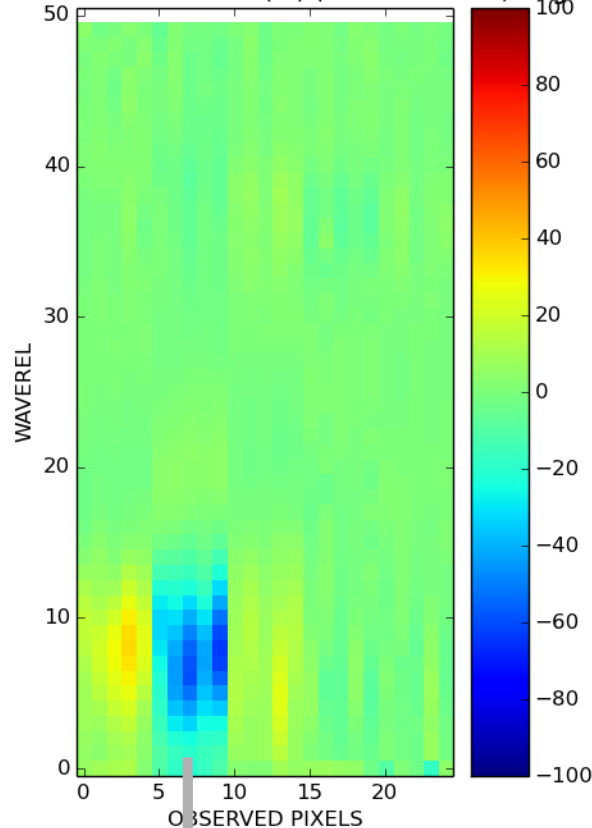


# NP Bandpass Issue Near 295 NM

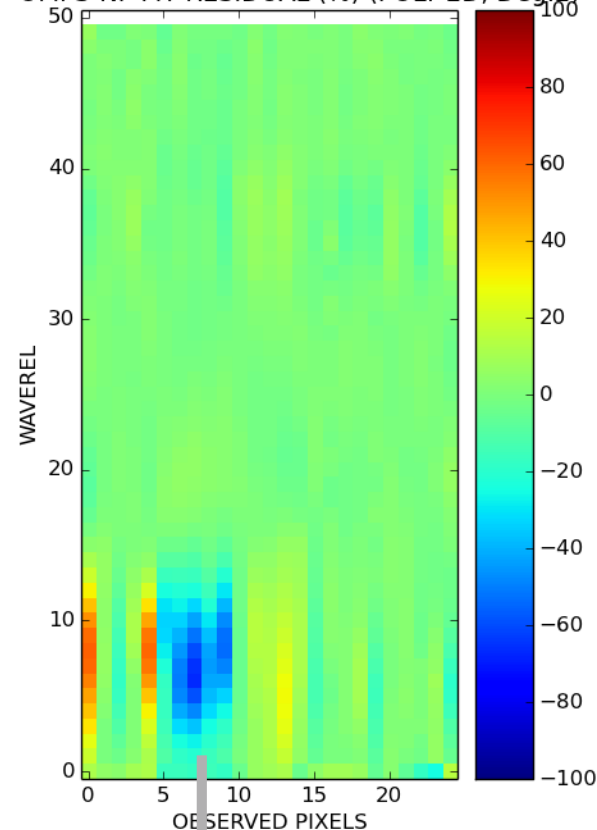


Our own fitting analysis indicates that there is something wrong with the 295 nm Data

NPP-OMPS-NP FIT RESIDUAL (%) (LEGENDRE 2D, Deg.2,2)



NPP-OMPS-NP FIT RESIDUAL (%) (POLY 2D, Deg.2)



**Relatively large fit residuals for pixels corresponding to 295 nm ( pixel index 5 - 9). These are happening at the tails. The degree of polynomials used for fitting is 2.**



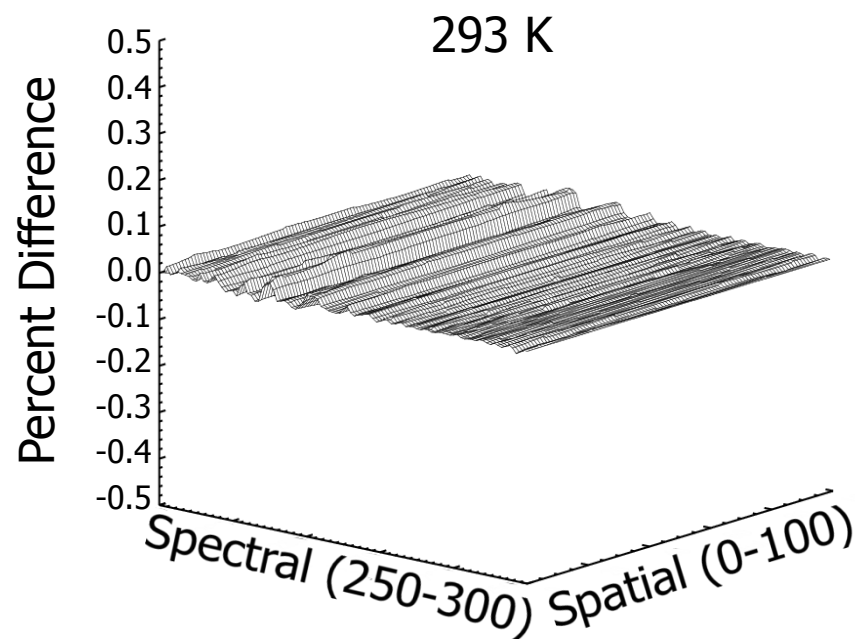
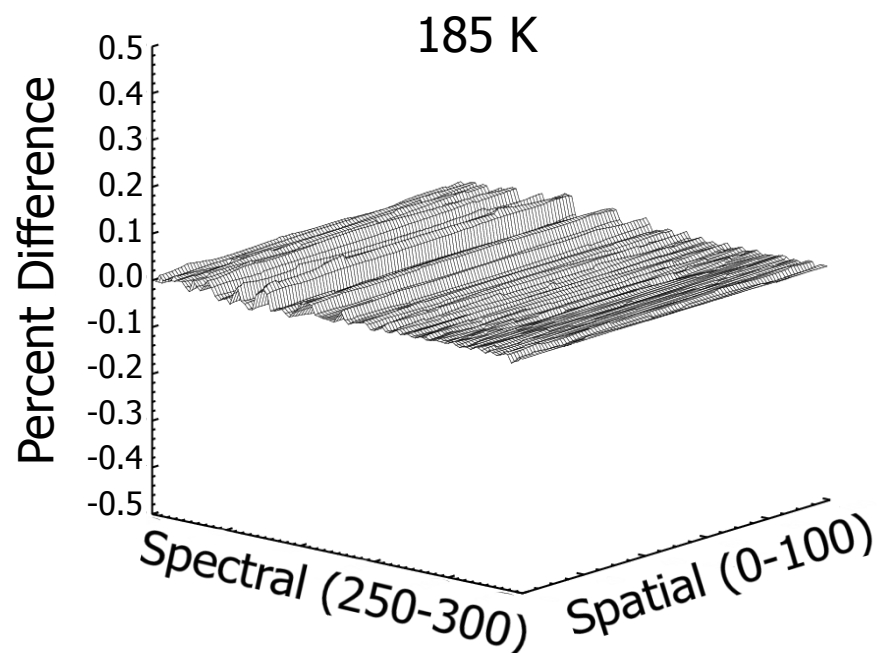
# Effect is negligible



We re-fit without the 295 nm Ball data

We calculated effective absorption coefficients for low and high temperatures and compared to coefficients calculated using a fit that included 295 nm data

Results show negligible effect ( $< 0.1\%$ )





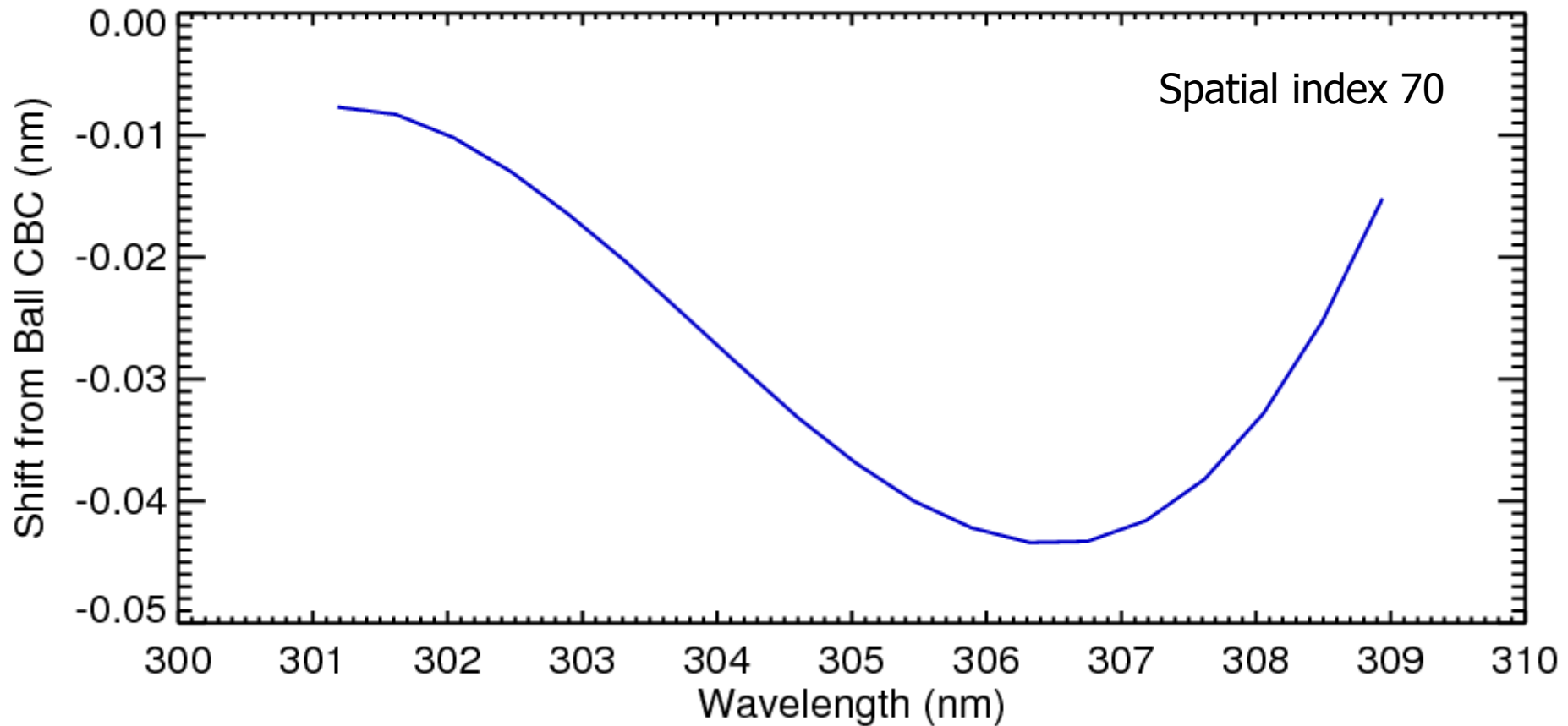
# Bandpass Issues in Dichroic Region



- ▶ Bandpass measurements taken by Ball in dichroic region are OK
  - However, Ball's analysis using those measurements did not include the dichroic's sensitivity factor
  - Their analysis led to incorrect wavelength assignments within dichroic region
- ▶ We are performing our own analysis to account for this sensitivity
  - Work is complete for the NP
  - We are still working on the NM
    - Only affects wavelengths within the dichroic region ( $< 310$  nm)



# NP Shifts Become Sizeable





# Other L1B Work



- ▶ We've gone to daily dark current corrections
  - Uses "open door" darks
    - Analysis indicates results as good as "doors closed" darks taken weekly
- ▶ We are planning to include FOV corners
  - Will be passed through to L2
  - If we have time

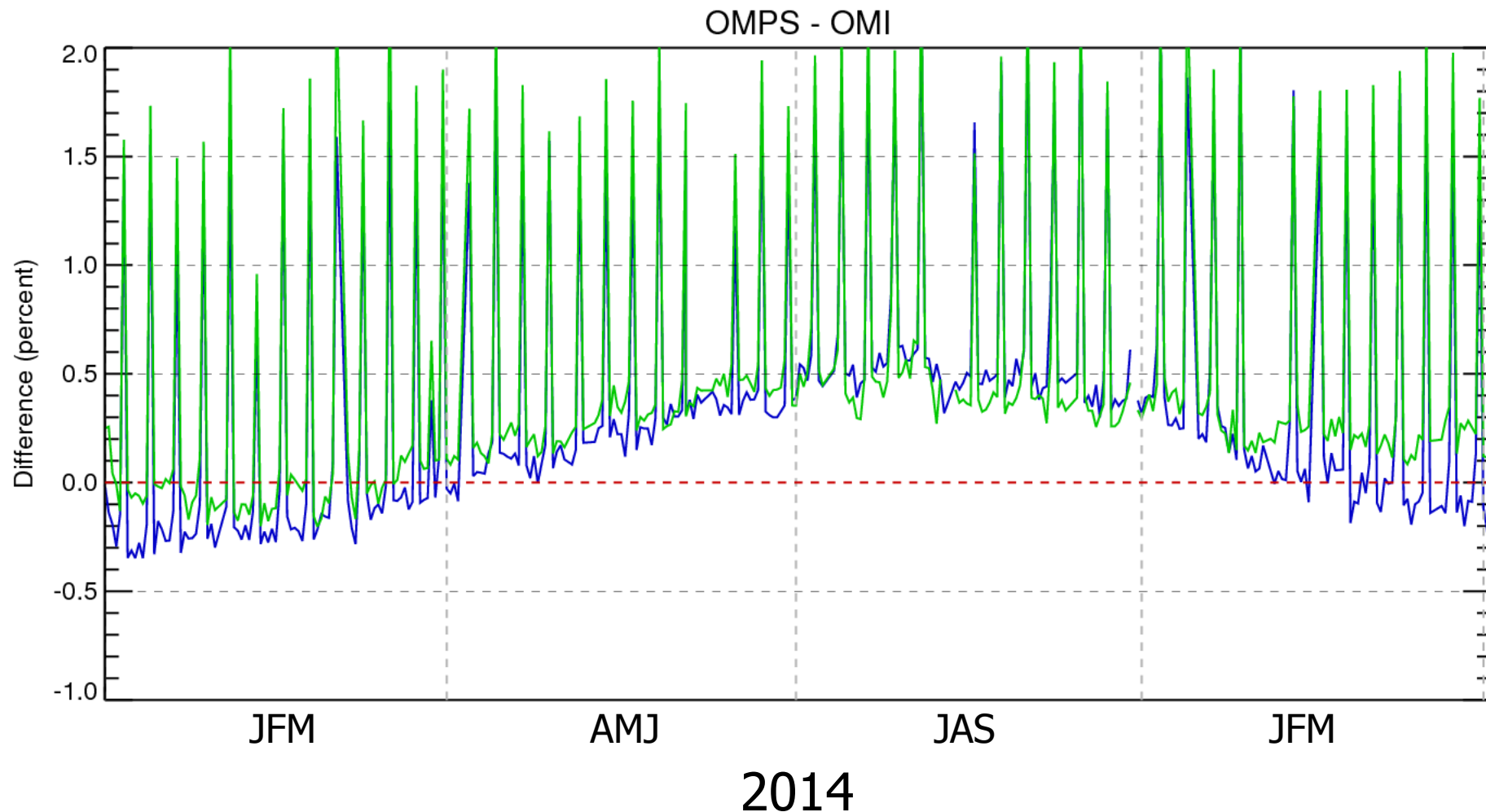




# L2 High Resolution Issue



L2 high resolution data was 2% higher than nominal data



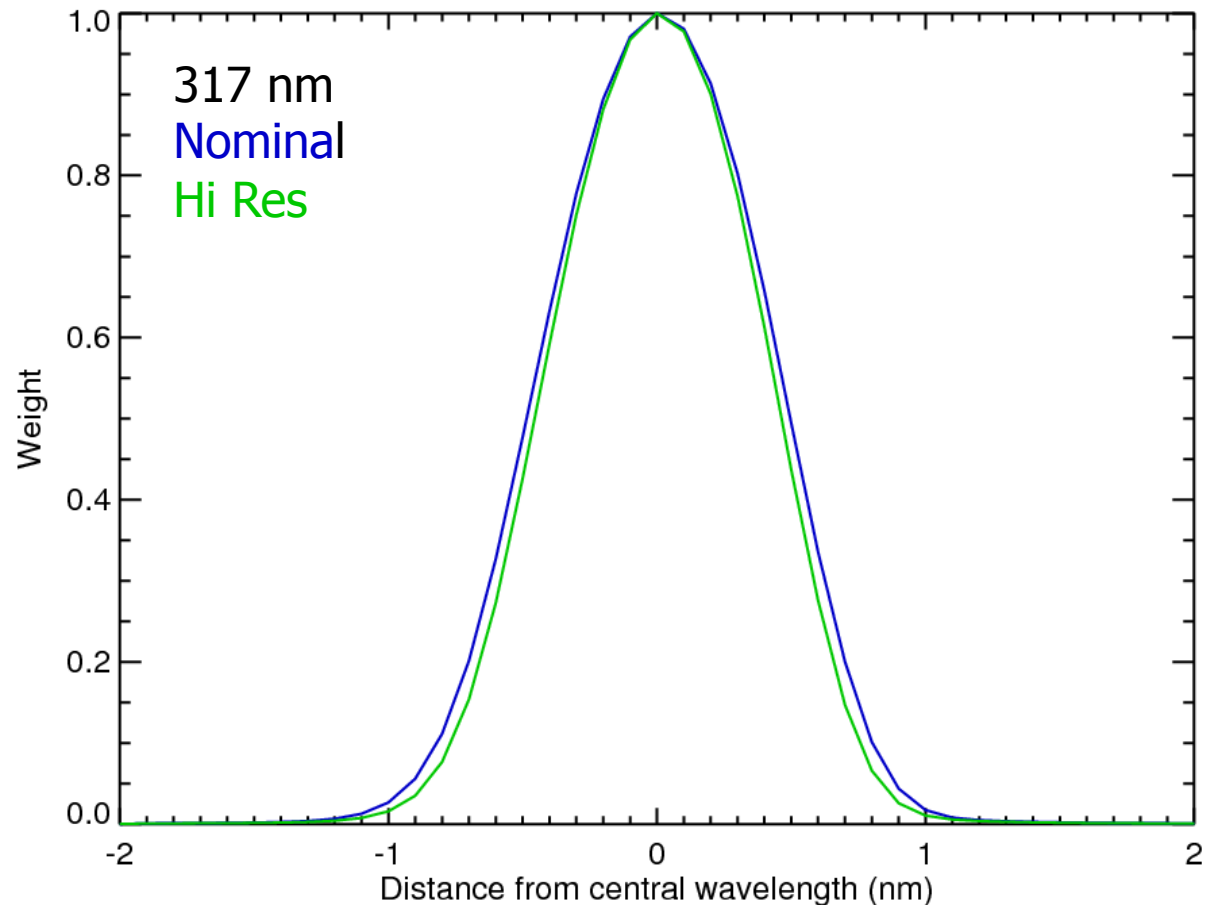


# L2 High Resolution Issue



Problem turned out to be due to the fact we were using same LUT for both high res and nominal data

But, due to different macro pixels, bandpasses for high resolution are different

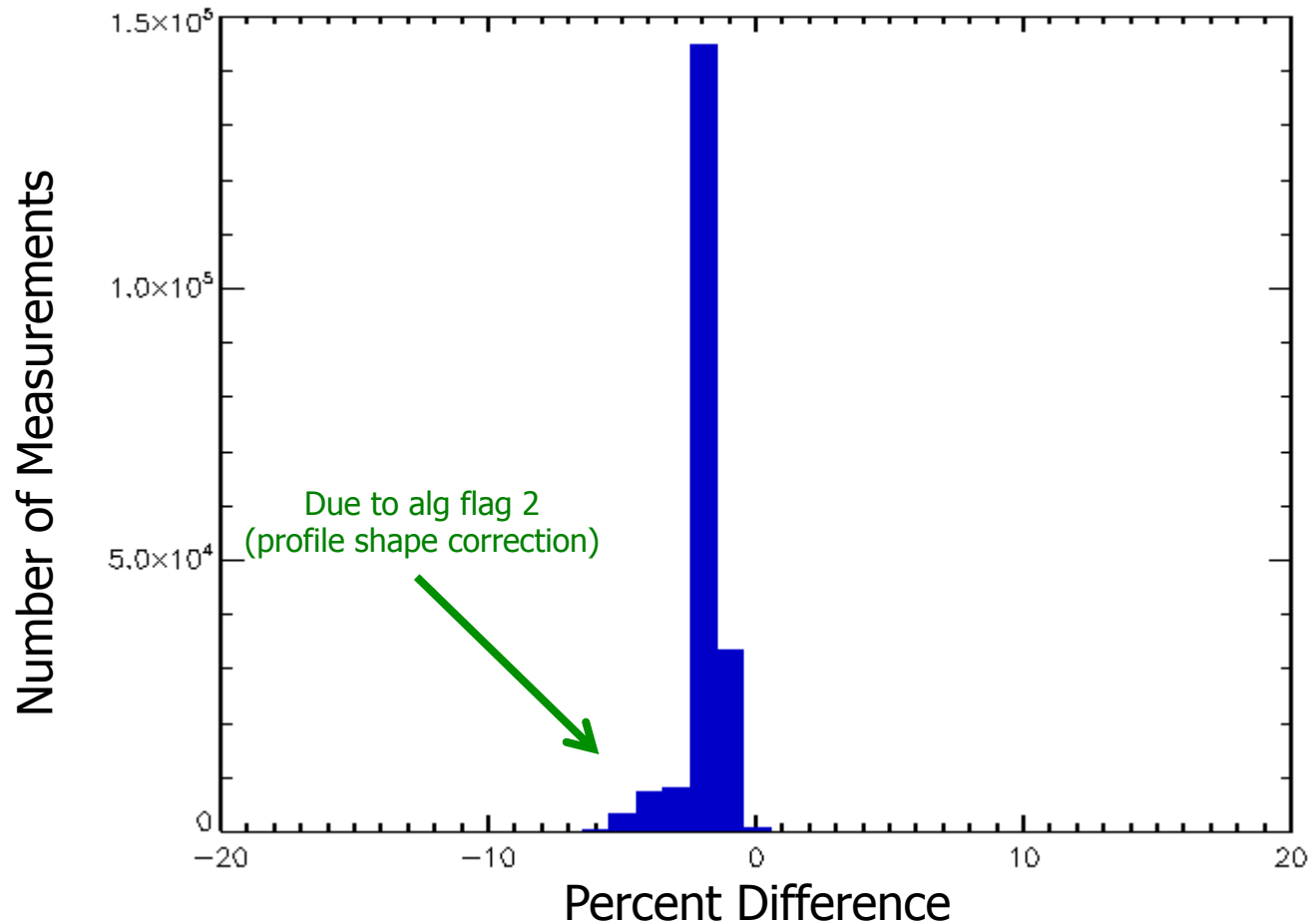




# L2 High Resolution Issue



OMPS new – OMPS old (gridded data)  
shows an almost 2% shift



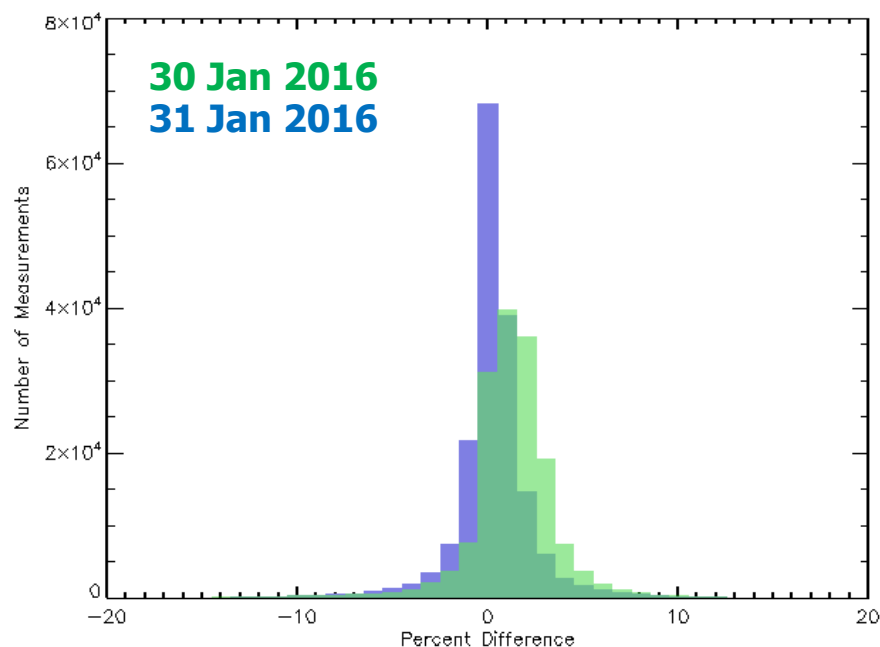


# L2 High Resolution Issue

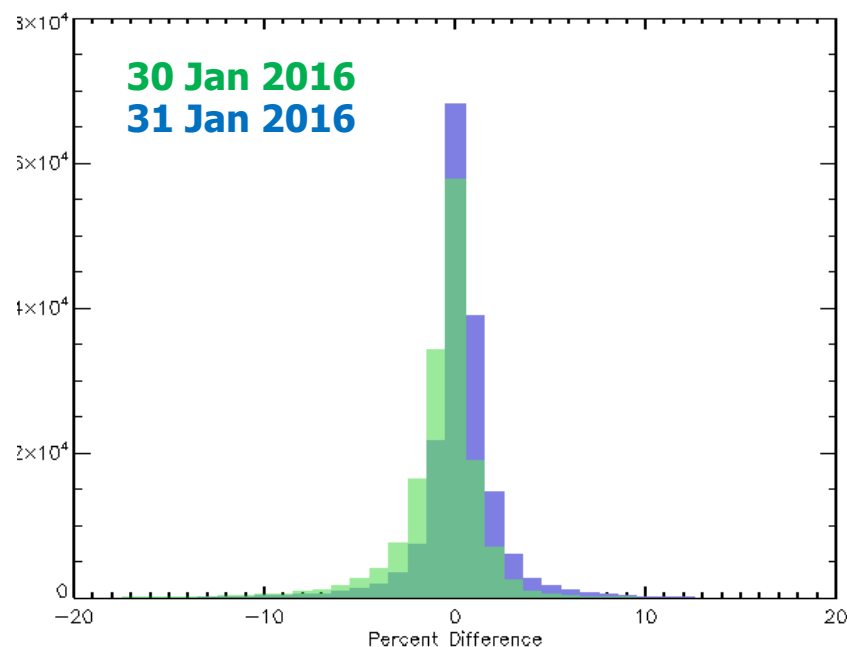


OMPS – OMI differences show we may have a slight overcorrection

**Before (Old LUT)**



**Before (New LUT)**

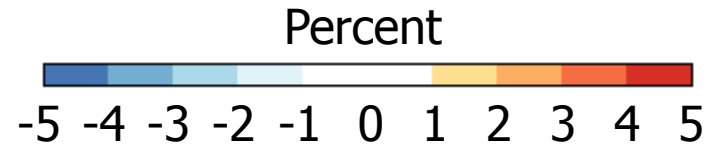
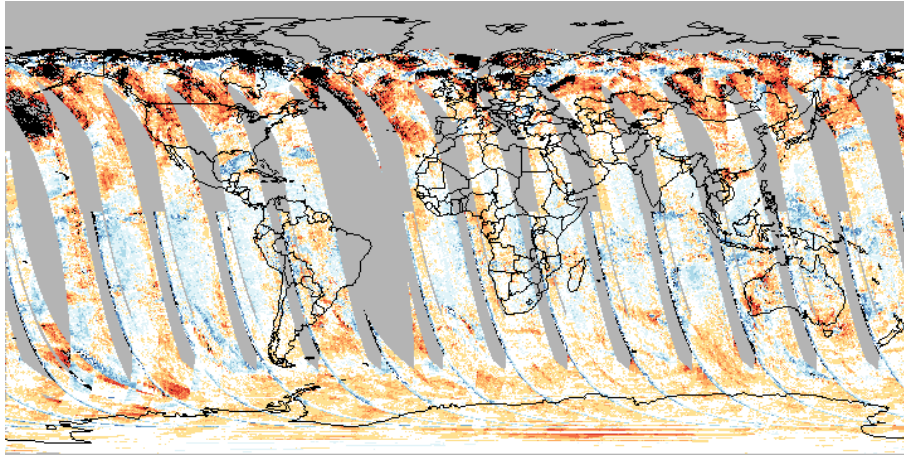




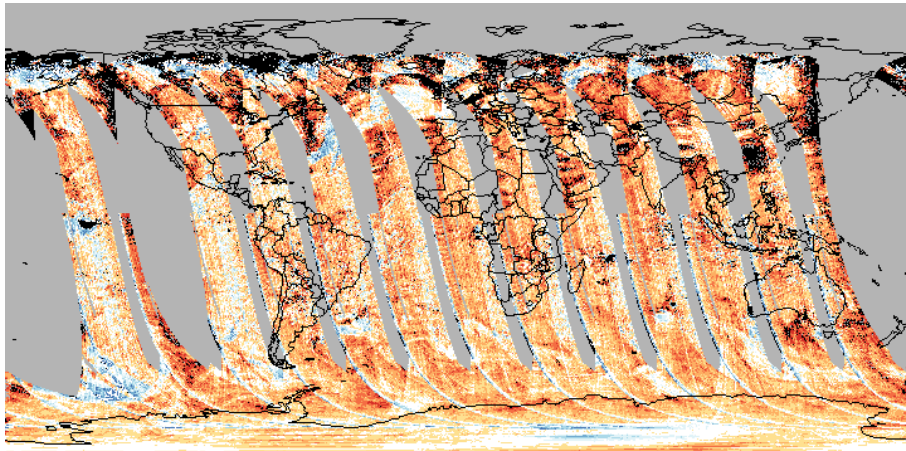
# L2 High Resolution Issue



OMPS – OMI (%) – 31 January 2016



OMPS (old) – OMI (%) – 30 January 2016



OMPS (new) – OMI (%) – 30 January 2016

